U. S. Application No. 10/588,448 Group Art Unit: 3723

Page 2 of 6

In the Claims:

Please amend the claims so that the pending claim set reads as follows:

(Withdrawn) In a hydraulic torque wrench fastener tightening system having a double

acting cylinder that turns a socket of the wrench upon an advance of the cylinder and ratchets backward over the socket without turning the socket upon a retract of the cylinder in which, in

response to an operator actuating an advance actuator and holding it actuated, the system

alternately: (a) applies a pressure to the cylinder to advance the cylinder until a programmable

set pressure is reached; and (b) applies a pressure to the cylinder to retract the cylinder until a set

pressure is reached; the improvement wherein the system includes controls that control the

system such that after when a desired torque of the fastener is reached, the controls continue the

alternation cycle between processes (a) applying a pressure to the cylinder to advance the

cylinder and (b) applying a pressure to the cylinder to retract the cylinder and the period of the

alternation cycle is reduced in duration to thereby audibly indicate to the operator that the

fastener has reached the desired torque.

2. (Canceled)

(Canceled)

4. (Withdrawn) A hydraulic torque wrench fastener tightening system as claimed in

claim 1, wherein the system further comprises a visual indicator that gives the operator a visual

indication that the fastener has reached the desired torque.

5. (Withdrawn) A hydraulic torque wrench fastener tightening system as claimed in

claim 1, wherein after the fastener has reached the desired torque the system shuts off a motor

that drives a pump of the system after a certain time period following reaching the desired

torque.

6. (Canceled)

OB\8757792.1

7. (Withdrawn) A hydraulic torque wrench fastener tightening system as claimed in claim 1, wherein the pump is shut off by the system in response to a reduction in the duration of the alternation cycle between processes (a) applying a pressure to the cylinder to advance the cylinder and (b) applying a pressure to the cylinder to retract the cylinder.

8. (Withdrawn) A hydraulic torque wrench fastener tightening system as claimed in claim 1, wherein the system stores information to convert pressure measurements to torques applied by the wrench.

 (Withdrawn) A hydraulic torque wrench fastener tightening system as claimed in claim 1, wherein the system includes a user adjustable pressure relief valve.

10. (Withdrawn) A hydraulic torque wrench fastener tightening system as claimed in claim 1, wherein the system has a port to communicate with an external computer.

11. (Withdrawn) A hydraulic torque wrench fastener tightening system as claimed in claim 1, wherein the pump is shut off if the advance actuator is not actuated for a period of time.

12. (Previously Presented) A method of tightening a fastener using a hydraulic torque wrench comprising the steps of:

tightening the fastener to a desired torque by repeatedly actuating a double acting cylinder of the hydraulic torque wrench over a first stroke distance; and

providing an audible indication by repeatedly actuating the double acting cylinder over a second stroke distance after the fastener has been tightened to the desired torque, wherein the second stroke distance is less than the first stroke distance.

13. (Previously Presented) The method of claim 12, further comprising the step of continuously holding an advance key to repeatedly actuate the double acting cylinder.

- 14. (Previously Presented) The method of claim 12, further comprising the step of providing a visual indication after the fastener has been tightened to the desired torque.
- 15. (Currently Amended) A method of tightening a fastener using a hydraulic torque wrench comprising the steps of:

holding an advance key actuating an advance actuator and holding it actuated to supply fluid to a double acting cylinder, and in response the hydraulic torque wrench alternating between:

turning a socket engaged with the fastener upon advancement of the double acting cylinder until a programmable set pressure is reached;

ratcheting backward over the socket without turning the socket upon retraction of the double acting cylinder until a set pressure is reached; and

increasing the frequency at which the double acting cylinder switches between advancement and retraction after a desired torque is applied to the fastener and thereby providing an audible indication that the desired torque has been applied.

- 16. (Currently Amended) The method of claim [[14]] 15, further comprising the step of supplying full pump flow to the double acting cylinder until the hydraulic torque wrench switches between advancement and retraction and vice versa.
- 17. (New) The method of claim 15, further comprising the step of providing a visual indication after the fastener has been tightened to the desired torque.
- 18. (New) The method of claim 15, further comprising the step of shutting off a motor that drives a pump that supplies fluid to the double acting cylinder after a certain time period following reaching the desired torque.
- 19. (New) The method of claim 15, further comprising the step of shutting off a motor that drives a pump that supplies fluid to the double acting cylinder in response to the increase in the frequency at which the double acting cylinder switches between advancement and retraction.

- 20. (New) The method of claim 15, further comprising the step of using the hydraulic torque wrench to convert pressure measurements to torques applied by the wrench.
- 21. (New) The method of claim 15, further comprising the step of using the hydraulic torque wrench to communicate with an external computer.
- 22. (New) The method of claim 15, further comprising the step of shutting off a motor that drives a pump that supplies fluid to the double acting cylinder if the advance actuator is not actuated for a period of time.